REMARKS

Claims 1-14 are currently pending. In the October 5, 2005 Office Action, the Examiner objected to the specification, stating that the language in the Abstract should not repeat the title. The Examiner also rejected claims 1-14 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,466,200 to Ulrich et al. (hereinafter "Ulrich"). Applicants respectfully traverse the objections and rejections for the reasons set forth hereinbelow.

A. Claim 1 Has Been Clarified In Response to the Examiner's Notes

In response to the request in the "Examiner Notes" section, Applicants have amended claim 1 to clarify the claim language.

B. The Abstract Complies with 37 CFR § 1.72

Applicants have revised the abstract to correct a typographical error by combining the first and second sentences, and respectfully submit that the abstract complies with the requirements of 37 CFR § 1.72 (including the word count limit and the prohibition against using form and legal phraseology) and does not repeat information given in the title. Accordingly, Applicants request that the Examiner reconsider and remove the objection to the abstract.

C. Claims 1-14 Are Not Anticipated by Ulrich

In response to the Examiner's rejection of claims 1-14 as being anticipated by the Ulrich reference, Applicants respectfully request reconsideration and withdrawal of the rejection because Ulrich's disclosure of a network of remote exercise machine simulators (each of which generates an interactive simulated environment) does not anticipate the present invention's use of a central server computing device to collect remote agent inputs and coordinate the interaction of the remote agent inputs to efficiently simulate a complex system of remote and independent inputs.

In particular, Ulrich discloses a network of computerized remote exercise machines, each of which includes a "processor which generates an interactive simulated environment" using a shared "environmental database [that] is stored and executed on each machine." Ulrich Patent, col. 2, lines 26-28; col. 8, lines 28-29; and col. 8, liens 34-

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37 ("After selection, that environment's database is transferred between computers (over the link 94) so that each computer can execute the same environment and participate in the group simulation."). Ulrich repeatedly discloses that the simulation is executed at the remote exercise machines. For example, when describing the exercise apparatus depicted in Figure 1, Ulrich teaches that the "interactive simulated environment is generated by a processor 18, such as a computer, and displayed on a display system 20." *See*, Ulrich Patent, col. 4, lines 9-11. Likewise, when describing the interactive exercise cycle depicted in Figure 2B, Ulrich describes a "computer 32 capable of generating an interactive simulated environment is mounted to an L-shaped leg 36 which extends from the stationary base 26." *See*, Ulrich Patent, col. 4, lines 52-54.

In this respect, Ulrich's distributed simulation approach was expressly distinguished by the Applicants in the application with the statement that:

> By centrally locating the modeling, analysis and display tools at the server 109, the aggregated results of the individual objects' behavior (controlled by the remote device inputs) can be efficiently simulated, thereby avoiding the complexity and time delays associated with distributing such functionality amongst the remote devices.

Application, p. 8 (paragraph 23) (emphasis added). Having specifically structured the claimed invention to recite that the server computing device collects remote inputs and coordinates the interaction of the remote agents in a centralized simulation, Applicants respectfully submit that Ulrich fails to disclose a central server which "coordinates the interaction of the remote agents based upon the collected object control node information and control instructions" to enable the coordinated and interactive simulation of a complex and dynamic system. *See, e.g.*, claim 1.

Once the claimed allocation of simulation functionality is taken into account, the error of the anticipation analysis becomes clear. For example, with regard to claim 1's requirement of a "server computing device" which includes an "object-based parallel modeling language component," the Examiner asserts that this requirement is disclosed by Ulrich's Figure 11, items 138/136. *See*, Office Action, p. 3. However, Figure 11 describes Ulrich's remote exercise machine, not any central server computing device. *See*, Ulrich Patent, col. 10, lines 53-55 ("A general process flow sequence of the interactive software which executes on the computer of each networked exercise apparatus is shown in FIG. 11." (emphasis added)). There are other examples. Claim 2
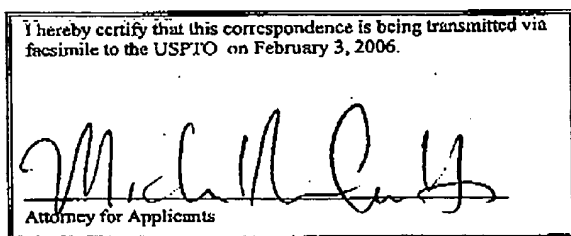
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recites that the server computing device includes "modeling tools," "analysis tools" and "display tools," but the Examiner relies on Ulrich's description of the remote exercise machine (col. 4, lines 9-11 and col. 5, lines 46-47 and 52-54) to reject this claim.

There are other problems with Ulrich's disclosure. One particularly glaring deficiency is that Ulrich entirely fails to teach or disclose the recited server-side "object-based parallel modeling language component" that coordinates remote inputs at the server to efficiently simulate a complex system of remote and independent inputs. Indeed, there is no reference in Ulrich to any "modeling language," whether "object-based," "parallel" or otherwise! Indeed, a careful review of the Ulrich passages cited by the Examiner -- "col.: 8 lines: 53-55, Figure 8 and 9 item 104; Figure 11 object-based parallel modeling language component ... item 138/136" -- does not show how Ulrich discloses the OBPML requirement. For example, the passage at column 8 ("This dual use of the phone signal is possible due to the relatively low-bandwidth of communication required for the shared parameters (e.g., position, direction).") says nothing about the OBPML component. As for the reference to items 138/139 in Figure 11, this figure illustrates the flow chart process for software executing on "each networked exercise apparatus" and the items 138 and 139 refer to the "interactive mode" and "download mode" steps taken by the remote exercise machine takes when networked to other computers. Again, no reference to any OBPML component at the server. Lastly, the reference to the hub processor 104 shown in Figures 8 and 9 is similarly unavailing since Ulrich describes the function of the hub processor 104 as a database distributor that is "responsible for limiting the information directed to each apparatus in the large-scale direct network of FIG. 8. The hub 104 can ensure, for example, that each apparatus only gets (parameter) updates about other users in the same general area of the simulated environment." Ulrich Patent, col. 9, lines 5-10. This database distribution function of the hub processor 104 is confirmed by Ulrich's description of the hub processor block diagram (Figure 12) and process flow flowchart (Figure 13), which confirm that Ulrich's hub processor 104 performs database update and distribution functions without ever mentioning or suggesting any modeling function, much less any "object-based parallel modeling language component."

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While there are additional claim requirements from claims 1-14 missing from the Ulrich disclosure, Ulrich's failure to disclose a central server for coordinating the interaction of the remote agents at the server computing device based upon the input data from the remote agents is sufficient to overcome the anticipation rejection. Accordingly, Applicants respectfully request that the anticipation rejection of claims 1-14 be withdrawn and that the claims be allowed.

CONCLUSION

In view of the amendments and remarks set forth herein, Applicants respectfully submits that all pending claims are in condition for allowance. Accordingly, Applicants request that a Notice of Allowance be issued. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is requested to telephone the undersigned at 512-338-9100.

I hereby certify that this correspondence is being transmitted via facsimile to the USPTO on February 3, 2006.

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